

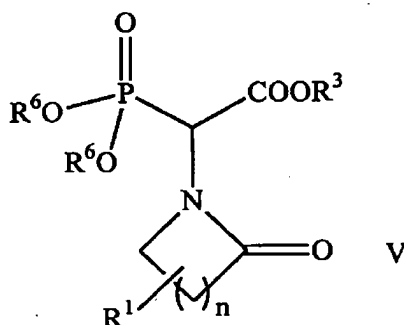
Docket: 71360 (US03)

PATENT

Claim Amendments

Claims 1 – 28 (Previously Canceled)

29. (Amended) A compound having the formula V



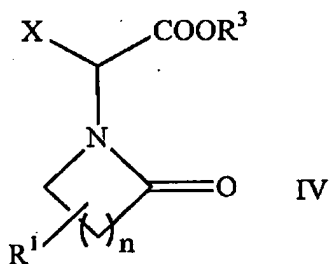
wherein R^1 and R^3 are, independently, ~~substituted or unsubstituted~~, branched or straight chain C_1 to C_{20} alkyl; branched or straight chain C_1 to C_{20} alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; ~~substituted or unsubstituted~~ C_3 to C_8 cycloalkyl; C_3 to C_8 cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; ~~substituted or unsubstituted~~ C_6 to C_{20} aryl; C_6 to C_{20} aryl substituted with one to three groups selected from C_1 - C_6 -alkyl, C_6 - C_{10} aryl, C_1 - C_6 -alkoxy, halogen, carboxy, cyano, C_1 - C_6 -alkanoyloxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfonyl, trifluoromethyl, hydroxy, C_2 - C_6 -alkoxycarbonyl, C_2 - C_6 -alkanoylamino, -OR', SR', -SO₂R', -NHSO₂R' or -NHCO₂R'; or substituted or unsubstituted C_4 to C_{20} heteroaryl, or a 5- or 6- membered aromatic ring containing 1 to 3 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, which may be substituted with up to three groups selected from C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, halogen, C_1 - C_6 -alkylthio, aryl, arylthio, aryloxy, C_2 - C_6 -alkoxycarbonyl and C_2 - C_6 -alkanoylamino; wherein R^1 can also be hydrogen, R^6 is ~~substituted or unsubstituted~~, branched or straight chain C_1 to C_{20} alkyl, branched or straight chain C_1 to C_{20} alkyl substituted with one to three

Docket: 71360 (US03)

PATENT

groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR, or substituted or unsubstituted C₃ to C₈ cycloalkyl, or C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR, and wherein R is C₁ to C₆ alkyl and R' is phenyl, naphthyl, or phenyl or naphthyl substituted with one to three groups selected from C₁-C₆-alkyl, C₆-C₁₀ aryl, C₁-C₆-alkoxy or halogen; and n is from 0 to 5.

30. (Amended) The compound of Claim 29, wherein ~~n is 2~~ and R¹ is hydrogen.
31. (Original) The compound of Claim 30, wherein R³ is methyl or ethyl.
32. (Original) The compound of Claim 31, wherein R⁶ is methyl or ethyl.
33. (Amended) A method of producing the compound of Claim 29, comprising reacting a compound having the formula IV



wherein R¹ and R³ are, independently, ~~substituted or unsubstituted~~, branched or straight chain C₁ to C₂₀ alkyl; branched or straight chain C₁ to C₂₀ alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; substituted or unsubstituted C₃ to C₈ cycloalkyl; C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; substituted or unsubstituted C₆ to C₂₀ aryl; C₆ to C₂₀ aryl substituted with one to three groups selected from C₁-C₆-alkyl,

Docket: 71360 (US03)

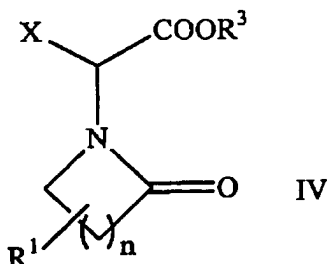
PATENT

C₆-C₁₀ aryl, C₁-C₆-alkoxy, halogen, carboxy, cyano, C₁-C₆-alkanovloxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, trifluoromethyl, hydroxy, C₂-C₆-alkoxycarbonyl, C₂-C₆-alkanoylamino, -OR, SR, -SO₂R, -NHSO₂R and -NHCO₂R; or substituted or unsubstituted C₄ to C₂₀ heteroaryl, a 5- or 6- membered aromatic ring containing 1 to 3 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, which may be substituted with up to three groups selected from C₁-C₆-alkyl, C₁-C₆-alkoxy, halogen, C₁-C₆-alkylthio, aryl, arylthio, aryloxy, C₂-C₆-alkoxycarbonyl and C₂-C₆-alkanoylamino; wherein R¹ can also be hydrogen, X is fluoride, chloride, bromide, or iodide, and n is from 0 to 5, with a phosphite having the formula P(OR⁶)₃, wherein R⁶ is substituted or unsubstituted, branched or straight chain C₁ to C₂₀ alkyl, branched or straight chain C₁ to C₂₀ alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR, or substituted or unsubstituted C₃ to C₈ cycloalkyl, or C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR, and wherein R is C₁ to C₆ alkyl and R is phenyl, naphthyl, or phenyl or naphthyl substituted with one to three groups selected from C₁-C₆-alkyl, C₆-C₁₀ aryl, C₁-C₆-alkoxy or halogen.

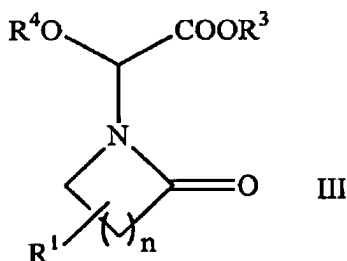
34. (Original) The method of Claim 33, wherein X is chloride or bromide.
35. (Original) The method of Claim 33, wherein R⁶ is methyl or ethyl.
36. (Original) The method of Claim 33, wherein the phosphite is present in the amount from 0.8 to 1.2 equivalents per 1.0 equivalent of the compound having the formula IV.
37. (Amended) A method of producing a compound having the formula IV,

Docket: 71360 (US03)

PATENT



wherein R¹ and R³ are, independently, ~~substituted or unsubstituted~~, branched or straight chain C₁ to C₂₀ alkyl; branched or straight chain C₁ to C₂₀ alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; ~~substituted or unsubstituted~~ C₃ to C₈ cycloalkyl; C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; ~~substituted or unsubstituted~~ C₆ to C₂₀ aryl; a C₆ to C₂₀ aryl substituted with one to three groups selected from C₁-C₆-alkyl, C₆-C₁₀ aryl, C₁-C₆-alkoxy, halogen, carboxy, cyano, C₁-C₆-alkanoyloxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, trifluoromethyl, hydroxy, C₂-C₆-alkoxycarbonyl, C₂-C₆-alkanoylamino, -OR', SR', -SO₂R', -NHSO₂R' and -NHCO₂R'; ~~or substituted or unsubstituted~~ C₄ to C₂₀ heteroaryl; or a 5- or 6- membered aromatic ring containing 1 to 3 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, which may be substituted with up to three groups selected from C₁-C₆-alkyl, C₁-C₆-alkoxy, halogen, C₁-C₆-alkylthio, aryl, arylthio, aryloxy, C₂-C₆-alkoxycarbonyl and C₂-C₆-alkanoylamino, wherein R¹ can also be hydrogen, X is fluoride, chloride, bromide, or iodide, and n is ~~from 0 to 5~~ 2, comprising reacting a compound having the formula III



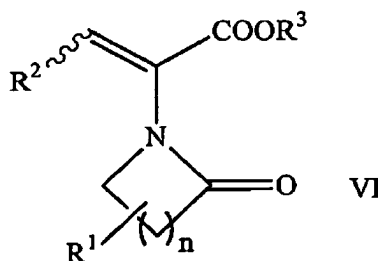
Docket: 71360 (US03)

PATENT

wherein R^1 , R^3 , and R^4 are, independently, ~~substituted or unsubstituted~~, branched or straight chain C_1 to C_{20} alkyl group; branched or straight chain C_1 to C_{20} alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; ~~substituted or unsubstituted C_3 to C_8 cycloalkyl group~~; C_3 to C_8 cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; ~~substituted or unsubstituted C_6 to C_{20} aryl group~~; a C_6 to C_{20} aryl substituted with one to three groups selected from C_1 - C_6 -alkyl, C_6 - C_{10} aryl, C_1 - C_6 -alkoxy, halogen, carboxy, cyano, C_1 - C_6 -alkanoyloxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfonyl, trifluoromethyl, hydroxy, C_2 - C_6 -alkoxycarbonyl, C_2 - C_6 -alkanoylamino, -OR', SR', -SO₂R', -NHSO₂R' and -NHCO₂R'; ~~or substituted or unsubstituted C_4 to C_{20} heteroaryl group~~, or a 5- or 6- membered aromatic ring containing 1 to 3 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, which may be substituted with up to three groups selected from C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, halogen, C_1 - C_6 -alkylthio, aryl, arylthio, aryloxy, C_2 - C_6 -alkoxycarbonyl and C_2 - C_6 -alkanoylamino, wherein R^1 can also be hydrogen, and n is ~~from 0 to 5~~ 2, with a compound having the formula PX_3 , wherein X is fluoro, chloro, bromo, or iodo, and wherein R is C_1 to C_6 alkyl and R' is phenyl, naphthyl, or phenyl or naphthyl substituted with one to three groups selected from C_1 - C_6 -alkyl, C_6 - C_{10} aryl, C_1 - C_6 -alkoxy or halogen.

Claims 38 – 41 (Previously Canceled)

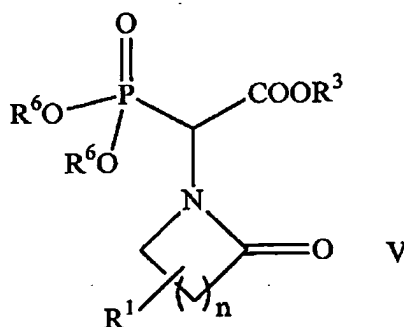
42. (Amended) A method for producing a compound having formula VI



Docket: 71360 (US03)

PATENT

comprising reacting a compound having the formula V



with an aldehyde having the formula HC(O)R^2 in the presence of a base, wherein R^1 , R^2 , and R^3 are, independently, ~~substituted or unsubstituted~~, branched or straight chain C_1 to C_{20} alkyl; branched or straight chain C_1 to C_{20} alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, $-\text{OR}$, $-\text{CO}_2\text{R}$, and $-\text{OCOR}$; ~~substituted or unsubstituted~~ C_3 to C_8 cycloalkyl; C_3 to C_8 cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, $-\text{OR}$, $-\text{CO}_2\text{R}$, and $-\text{OCOR}$; ~~substituted or unsubstituted~~ C_6 to C_{20} aryl; C_6 to C_{20} aryl substituted with one to three groups selected from C_1 - C_6 -alkyl, C_6 - C_{10} aryl, C_1 - C_6 -alkoxy, halogen, carboxy, cyano, C_1 - C_6 -alkanoyloxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfonyl, trifluoromethyl, hydroxy, C_2 - C_6 -alkoxycarbonyl, C_2 - C_6 -alkanoylamino, $-\text{OR}'$, SR' , $-\text{SO}_2\text{R}'$, $-\text{NHSO}_2\text{R}'$ and $-\text{NHCO}_2\text{R}'$; ~~or substituted or unsubstituted~~ C_4 to C_{20} heteroaryl, or a 5- or 6-membered aromatic ring containing 1 to 3 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, which may be substituted with up to three groups selected from C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, halogen, C_1 - C_6 -alkylthio, aryl, arylthio, aryloxy, C_2 - C_6 -alkoxycarbonyl and C_2 - C_6 -alkanoylamino; R^6 is ~~substituted or unsubstituted~~, branched or straight chain C_1 to C_{20} alkyl, branched or straight chain C_1 to C_{20} alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, $-\text{OR}$, $-\text{CO}_2\text{R}$, and $-\text{OCOR}$, ~~or substituted or~~

Docket: 71360 (US03)

PATENT

~~unsubstituted~~ C₃ to C₈ cycloalkyl, or C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; R is C₁ to C₆ alkyl and R' is phenyl, naphthyl, or phenyl or naphthyl substituted with one to three groups selected from C₁-C₆-alkyl, C₆-C₁₀ aryl, C₁-C₆-alkoxy or halogen; R¹ and R² may, independently, be hydrogen; and n is from 0 to 5 2.

43. (Original) The method of Claim 42, wherein the base comprises an amidine base or a guanidine base.

44. (Original) The method of Claim 42, wherein the base comprises 1,5-diazabicyclo(4.3.0)non-5-ene; 1,8-diazabicyclo(5.4.0)undec-7-ene, or tetramethylguanidine.

45. (Original) The method of Claim 42, wherein the base is present in the amount from 1.0 to 2.0 equivalents per 1.0 equivalent of the compound having the formula V.

46. (Original) The method of Claim 42, wherein the aldehyde is present in the amount from 0.8 to 1.5 equivalents per 1.0 equivalent of the compound having the formula V.

47. (Original) The method of Claim 42, wherein the aldehyde is acetaldehyde.

Claims 48 – 50 (Canceled)

51. (Amended) The ~~compound~~ method of Claim 42 wherein ~~n is 2 and~~ R¹ is hydrogen.

52. (Amended) The ~~compound~~ method of Claim 51 wherein R² and R³ are methyl.

Docket: 71360 (US03)

PATENT

53. (Amended) The ~~compound~~ method of Claim 51 wherein R^2 is methyl and R^3 is ethyl.
54. (Previously Added) The method of Claim 52 or 53 wherein R^6 is methyl or ethyl.